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Holyoke, Mass.

D FARM.

Colts, Geldings,
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MOODY,
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Margin Prices
shed Pairs.

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r, foaled 1894 and 1895,
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have ever driven. Their
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team. Thoroughly city
in \$30. Price \$400

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F. ARNEY,
y, Kingston, N. Y.

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PRINC 1899

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nd, handsome and of fine
eld at \$50 during 1900.

ELSON, N. J.

OCT. 27.

SHUA, N. H.

28, 29, 30, 31

Sept. 3, 4, 5, 6

10, 11, 12, 13

7, 18, 19, 20

24, 25, 26, 27

Oct. 2, 3, 4, 5

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16, 17, 18, 19

23, 24, 25, 26

facilities for same

GOODNOW, Westfield.

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MASSACHUSETTS PLOUGHMAN



VOL. LIX. - NO. 28.

BOSTON, MASS., SATURDAY, APRIL 7, 1900.

WHOLE NO. 3038.

MASSACHUSETTS PLOUGHMAN
NEW ENGLAND AGRICULTURE
Official Organ of the N. E. Agricultural Society

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All persons sending contributions to THE
PLOUGHMAN for use in its columns must sign
their names, not necessarily for publication, but
as a guarantee of good faith, otherwise they will
be consigned to the waste-basket. All matter
intended for publication should be written on
one size paper, with ink, and upon but one side

correspondence from particular farmers, giving
the results of their experience, is solicited.
Letters should be signed with the writer's real
name, in full, which will be printed or not, at
the writer's wish.

THE PLOUGHMAN offers great advantages to ad-
vertisers. Its circulation is large and among the
most active and intelligent portion of the com-
munity.

AGRICULTURAL.

Spraying for Insects and Blight.

The great increase of insects that destroy
fruit, and of the not less injurious fungoid
diseases that reach the same end by destroy-
ing foliage, compel the fruit grower who
wishes to make any success to resort to spray-
ing as the best preventive of both evils.
With no spraying there is certain to be no
fruit except in seasons when the weather is
so favorable that all the trees bear and
the market is glutted with low-priced
fruit. This may sometimes happen where
the injury is due to insect enemies
that destroy the fruit. After a year
when the fruit trees were barren these
insects disappear from lack of any fruit
on which to breed, and one, two or
three years may elapse with comparative
exemption from their ravages until like in-
sects are imported from other sections.
Apples which contain the codling moth
worm are often brought into localities
where this pest has been starved because
of apples were grown there the previous
year in which to feed and breed. These
apples are commonly piled in cellars, and
in early spring as the worms emerge from
the apple developed into codling moths they
are often seen at cellar windows trying to
escape to the outer air, where they can find
blossoms and fruit in which to deposit
their eggs.

If before cellar windows are opened in
early spring all the windows are closed, and
the air inside is kept fresh, then now from
the codling moth. If only a few escape
from cellar windows they wait until the
trees have blossomed, and then lay their eggs,
which in due time develop into moth, and
the pest soon becomes as plentiful as ever.
We believe that few which winter out of
don't live until spring. They are destroyed
by the birds which winter here, and which
perform a most important service in killing
off injurious insects at a time when it is
impossible for them to escape.

Yet wherever the codling moth has be-
come plentiful spraying to destroy it be-
comes a necessity. Tails need not be done
until the apple blossoms are falling, and
should be a dose of Paris green, which to
prevent injury of the tender leaves should
be mixed with the Bordeaux mixture. If the
leaves are very tender add more lime to the
mixture, and reduce the amount of poison.
It only needs the very smallest dose of
poison to destroy the codling moth. It is
probable that the moth finds it necessary to
bite into the apple before depositing its egg,
and in this way it secures the poison that
kills its existence.

But with nearly all fruits the dangers
from fungus diseases, such as blight, scab
and rot of its various kinds, are far greater
than from insects. Spraying with fungi-
cides to destroy these is the most import-
ant work for the fruit grower, and it is
also the work that must be done earliest,
even before the buds have expanded into
leaves.

The sulphate of copper at the rate of
one pound dissolved in 25 gallons of
water is the right proportion for this early
spraying. It destroys the spores that
have wintered on the branches of the tree
before they are propagated by the
warmth of spring into activity, and spread
by passing winds to all parts of the tree,
ready to fasten on the first tender leaves
that put forth. Many people put off spray-
ing until the trees show the effects of blight.
By that time a good deal of the injury that
the fungus can do is already done, for the
destruction of even a part of a leaf when it
has been once made in early spring cannot
be restored, and the leaf made to grow per-
fect all the season thereafter.

We are learning that to maintain healthy
foliage on fruit trees is the surest way to
secure abundant and perfect fruit. The
first spraying with a strong solution of sul-
phate of copper is worth more to secure
this than a dozen applications later in the
season, though these should be made at
brief intervals all through the season. It is
better not to wait until blight shows itself
though most fruit growers do this. De-

stroy the spores as rapidly as they form
and before they have fastened the leaves.
In this way the spores that affect the
fruit with rot will also be lessened. At the
first application in spring time must be
used so as to keep the leaves from being
burned by the copper sulphate mixture.
It is best not to use it after the fruit begins
to ripen, for it will injure its appearance
and selling value, though the notion that
the small amount of Bordeaux mixture that
adheres to fruit makes it dangerous for
people to eat it has been shown to be a
great mistake. Few or no people eat the
skins of fruit, especially if there be some
coloring matter on the outside. It will
always be wiped off before being put to the
mouth.

While the use of insecticides and of fun-
gicides involves much extra labor, it is much
more than repaid by the increased crop and
by saving the necessity of assorting the
fruit before marketing it. The use of fun-

If, however, there shall be a correspond-
ing increase in the number of caterpillars
the coming summer the conclusion must be
inevitable that the maple-sugar industry is
in jeopardy.
The absolute destruction of the sugar
maples in Vermont, which is not an im-
probability, should the conditions of the
past three years continue to prevail, would
mean not only the loss of a considerable
annual income to the State, but the passing
of one of the most picturesque features of
rural life in North America.
The grubbing of an existence out of the
rugged foothills of the Green Mountains is
hard work. Insectant toll has always been
the lot of the Vermont farmer ever since
the axes of the early pioneers from Mass-
achusetts and Connecticut blazed a way for
civilization.
The growing season in Vermont is short.
Crops must be hurried into the ground as
soon as the frost is out in the spring, and

has not eaten, with a little wooden paddle
fashioned from green birch wood, fresh
maple sugar "waxed" on snow, has missed
a treat, the like of which the most accom-
plished confectioner cannot create. Then,
again, a sugaring off is an occasion for a
neighborhood gathering. Many times ar-
rangements are made for a series of these
events at different sugar houses, with a
general invitation extended to the people in
the locality, and a double welcome to the
stranger who may pass that way.
There is no formality at these assemblies.
Every one is expected to eat all the sugar
that he can hold, and when the limit is
reached to take the sweet taste out of his
mouth with a sour cucumber pickle, in
order that he may eat some more. The
social function in no way interferes with
the work. The syrup is boiled over a hot
fire until it reaches a certain consistency,
when it is turned into wooden or tin pails
or cake molds and allowed to harden. The

below the notch. Much of the sap was
wasted, and the primitive process of tap-
ping soon destroyed the trees, but the
forests in those days were too extensive to
be regarded from an economical point of
view.
The sap was boiled in large cast-iron
kettles, one or more of which were the
property of every early settler, and which
were primarily used in the making of
potash "sals" from the leachings from
hardwood ashes. The kettle and the axe
were the only utensils which the farmer
did not turn out with his own hands. To
purchase these no money was used in the
transaction, for money was almost an un-
known thing in the early days of Ver-
mont. A "do" for about \$50, "payable in
nearest cattle in October or marketable
grain in January," constituted the early
settlers' entire investment in the sugar
business. Today an equipment capable of
producing the high-grade article demanded

which the pith had been panned. Later
the gauge was dispensed with and the tap-
ping was done with a small auger.
The most advanced improvement was
from the potash kettle, with its gyp-fire,
to the sheetiron pan, stone arch and com-
fortable sugar house. The arches were
really long, open-top covers, in use of stone
masonry with pieces of railroad iron for
grating and a tall brick chimney at the
other end. The arch was built a little
smaller than the pan, so that when the
latter was placed upon it the arch was just
covered. Wood, cut four feet long, and the
draught created by the open front and the
tall chimney, made a fierce fire, which boiled
away many times the number of gallons of
sap that could be evaporated in the old pot-
ash kettle. In the early seventies the Ver-
mont farmer who had 1000 trees, buckets
and one or more big pans was a progressive
sugar maker.

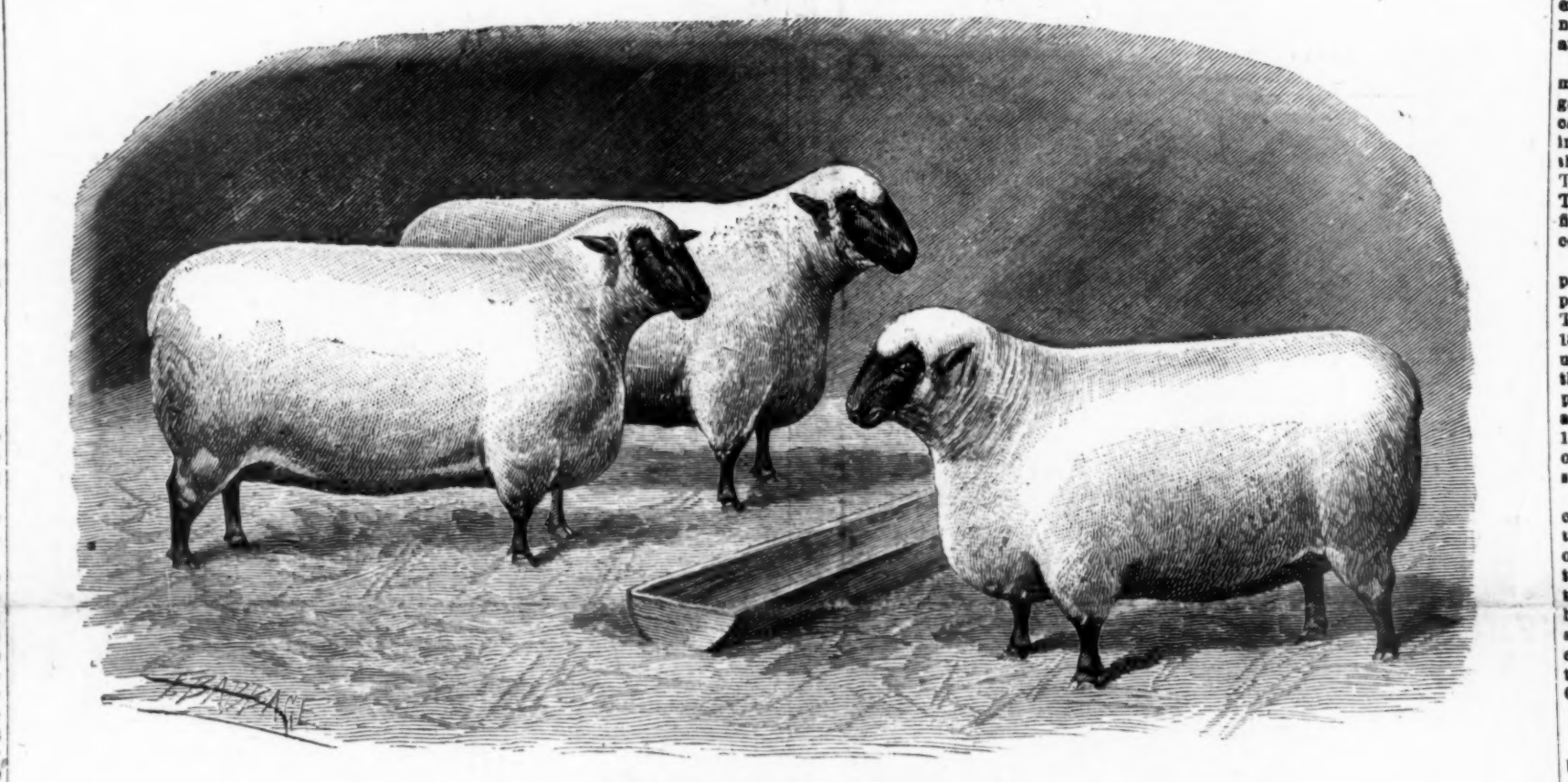
Maple sugar is the single product in which
Vermont leads all other States, both in
quality and quantity. The sugar is made
extensively in Maine, New Hampshire,
northern New York and northern Ohio,
and in some sections of Canada.
The product of the best sugar orchards is
marketed in two forms, in syrup, put up in
gallon cans or bottles, or sugar, moulded in
cakes. The cakes are about two and one-half
inches square, one-quarter of an inch in
thickness, and weigh about two ounces.
The cakes are packed in 10-pound boxes.
They are sold as confectionery, when they
first appear on the market in spring, and
command a high price.

According to the census of 1890, Vermont
produced in the year previous 14,123,921
pounds of sugar and 993,635 gallons of syrup.
The value was \$1,248,856. The season of
1899 was shorter than the average, and
under normal conditions it is estimated that
the orchards of the State are capable of
producing 25,000,000 pounds of sugar, with
a valuation of \$2,000,000. There are fully
15,000 sugar makers in the State, two-thirds
of whom produce over 500 pounds each
season.
Of all the maple sugar produced in this
country less than one per cent. is made from
the sap of the maple tree. There are dozens
of firms in all of the large cities that do a
thriving business putting up the adulter-
ated article and marketing it under the
brand of "Pure Vermont." More maple
sugar is made annually in the city of Chi-
cago than could be produced from all the
trees of the Green Mountain State—Boston
Globe.

Parasites a Paying Crop.

The common parasite is a root that always
brings a good price in market. It can be
grown as cheaply as any other when the
proper conditions are observed, and these
are not nearly so difficult as many are apt to
suppose. Yet the price remains high, and
there are times nearly every winter when
the demand cannot be supplied except at
rates which if the grower could get them
would make this the most profitable crop
grown. In such cases it is the fact that
parasites are held back by the difficulty
of getting them to market that makes
them scarce, rather than any real
deficiency in the supply if it could
be brought to the consumer. The parasite
is so hardy that it is often left in the
ground all winter, and though it must be
frozen it thaws out in contact with the
soil and its flavor is not injured. There is a
difficulty with those parasites that are win-
tered where they grow. The plant starts to
grow so soon as the ground thaws, and after
the first green sprout appears it very soon
becomes unfit to eat. For this reason most
growers put the parasites in underground
pits, covering them well with earth and
throwing some water on this to prevent
them from drying out. From these pits
they must be removed early in spring and
placed in close proximity to ice so that they
will always be kept at the freezing
temperature.

It requires rich land for parasites, and in
early spring when the seed is sown even
the rich soil must be supplemented with an
active manure to furnish available nitrogen.
We always found good results from an ap-
plication of well-rotted manure, mixed
with the soil in the rows, and
sprinkled with hardwood ashes that had
not lost their caustic properties just before
the soil was covered over the seed. This
application of wood ashes to nitrogenous
manure causes a strong smell of ammonia.
Not as the seed manure, but as the soil
once covered with moist soil all or nearly
all of this is imprisoned and absorbed by
it, and this gives the young parasite from
the first a vigorous growth, that enables
them to be weeded by hand with far less
trouble than if planted even in rich soil
without the manure fertilization in the
rows. Probably rich horse manure could
be used as effectively as hen manure for
this purpose. But the food of most hens is
much more concentrated than that of
horses, and it contains a larger proportion
of nitrogen, especially if the liquid excre-
ment is not mixed with it, as should always
be done in saving horse manure.
It is not practicable to grow parasites in
succession on the same land, as they are
apt to be attacked by a large worm, which
always comes in the second year and which
makes such destructive work on the leaves
as to destroy the crop. Even when the
parasite is set to grow and it shows
always be dug up and replanted as far
as possible from where it grew. Where a
parasite root is allowed to stand over winter
where it grows, when it grows, it shows the
effect of winter freezing and thawing, and
also of lack of cultivation, as the ground is
always hard around it. Seed thus produced
will be worse than worthless for planting,
as the parasite like the carrot very quickly
degenerates into a weed when it is deprived
of good culture. In some places wild
parasites and wild carrots have become
among the worst weeds that the farmer has
to contend with. They are, of course, bi-
ennial, and pulling them up when they are
going to seed ends them, provided the plant
has not too far advanced so that the seed
will be perfect after it is uprooted. But
that in grass land makes a long job, as the
plants grow very small and seed when they
are less than a foot high.



HAMPSHIRE DOWN FAT WETHERS.

glides has made the growing of fruit a safe
business, free from all risks except those of
autumn frost, and in many places fruit
growers have learned ways to guard against
the even this danger. We are fast coming to
the time if it is not already here when the
growing of first-class fruit will become as
sure a business and attended by even fewer
risks than all other branches of farming.
That will mean a greatly increased produc-
tion of fruit, of such good quality that it
will no longer be held for the few who can
afford to pay higher prices, but it will be
largely used as food by all with a cor-
responding advantage to the health of the
people, few of whom use fruit as food to the
extent that they should.

Vermont's Maple Sugar Industry.

As the sun mounts higher and higher in
the heavens these bright, sunny days of
early March there are hundreds of farmers
in Vermont who are confronting one of the
most serious problems that has come to
them in a generation.
It is time to prepare for the annual maple
sugar season, and much of the preliminary
work has already been accomplished.
There is no denying, however, that the
maple sugar maker is a solitary regarding
the future of the industry. During the past
three years the forest tent caterpillar
(dislocampa distria) has swept over the
territory to which the rock maple (acer
saccharinum) is indigenous, and has wrought
incalculable damage.

The pest did not make its appearance in
any considerable numbers until the spring
of 1898, and in 1899 the most remote
orchards were invaded and the trees were
completely defoliated.
Hundreds of trees are known to have
been killed, and many of the dead giants
which were a source of profit to their
owners and to their fathers before them
have been cut down during the past winter
for lumber or firewood.

Of the 50,000,000 pounds of pure maple
sugar annually produced in the United
States fully one-third is accredited to Ver-
mont. In 1899 there was made in Vermont
less than one-third of the usual amount.
The atmospheric conditions which pre-
valled during the season undoubtedly con-
stituted the chief cause of this shortage,
but it was noticeable that sap did not flow
in the usual quantities during the few days
when good weather prevailed.

In 1899 the caterpillars were more nume-
rous than in the two previous years, and
their destructive work was more thoroughly
done. In several instances railway trains
were stopped by the worms, which had
crawled over the tracks in such numbers
that their crushed bodies, acting like screws
on the rails, caused the wheels of the loco-
motive to slip.
Entomologists who made a study of the
situation in 1899 found that the caterpillars
were infested by parasites which destroyed
the moths in the cocoon, and for this reason
there is hope that the pest may gradu-
ally disappear.

hurried into the barns before the return of
freezing weather in the fall, and in the
meantime every sunny day must be util-
ized to make hay for the subsistence of the
cattle during the long winter months.

Because of this struggle against condi-
tions in a region where nature so coldly
responds to the efforts of the husbandman
there has been a large migration of young
Vermonters during the past 20 years to the
cities. Many of them have won distinction
in the professions and in business, and
while in their memories of the back-scholar
grindstone and dull rhythms of boyhood
days there are few regrets, their thoughts
today are turning to the old farm and the
"sugar place," back on the hill.

Even for the gray-haired grandfathers, who
made his first syrup in an iron kettle, sug-
aring still has its fascination. There is no
department of labor on a Vermont farm
which so nearly resembles play. If the snow
is deep the breaking of the roads, the dis-
tributing of the buckets and the tapping of
the trees are less wearisome, but once the
apparatus is all in running order the work
is comparatively easy. There are times
when the sap runs so fast that the buckets
must be emptied twice during the same day,
and then the gathering team must hustle,
for a sugar maker above all other things
despises the loss of sap. A Vermont farmer
is a good observer of the Sabbath, but he
will not allow his sap buckets to overflow
on the day of rest.

Holling by night was a frequent occur-
rence in the days of the old iron kettles and
pans, but the enhanced capacity of the
scientifically constructed evaporators has
made this almost unnecessary. With a
modern outfit two men, one to rather and
one to boil, can successfully operate a sugar
place of 700 to 1000 trees, provided the ter-
ritory covered is not too extensive.

Continuous "sap weather" for any num-
ber of days is the exception, and not the
rule, and there is always much leisure for
visiting from sugar house to sugar house.
Undoubtedly much of the charm of the
sugar season is because it marks the end
of the long, dreary winter and the beginning
of the glad time. During the first week the
ground may still be covered with a foot or
more of snow, yet there are many signs that
spring is not far away. There is a warmth
in the south wind that has not before been
noticeable for months, and the sound-trans-
mitting power of the atmosphere has
changed. The brook, with the added vol-
ume of water from the melted snow, have
again found their voices to protest against
the icy barriers from which the sun has not
yet released them. The crows have left
their winter homes in the hemlock swamp,
and on moonlit evenings the weird calls of
making screech owls startle the lone peo-
ple on the road. Nature recognizes the change,
as yet almost invisible, and man, nature's
grandest creation, most of all.

While sap is being gathered and reduced
to the syrup stage, the work is entirely in
the hands of the "men folks," but the
sugaring off is an occasion for the partici-
pation of the entire household. He who

process is simple and requires the attention
of but one person, whose duty it is to see
that the syrup does not boil over the edges
of the sugaring off pan.

The origin or discovery of the process of
making a sweet from the sap of the maple
will always remain a mystery. Years be-
fore Columbus set foot on San Salvador the
Indians, the Algonquins and the Hurons,
who dwell in the Champlain valley, pos-
sessed the secret. With their rude hatchets
of flint a gash was hacked in the side of
the tree and the sap from the wound
trickled down an inclined piece of wood
into artistically constructed vessels of birch
bark.

A quantity of sap was placed in shallow
creeks of clay, and having heated a number
of stones very hot in a fire near by, they
were dropped into the liquid. The sap
would always remain a mystery. Years be-
fore Columbus set foot on San Salvador the
Indians, the Algonquins and the Hurons,
who dwell in the Champlain valley, pos-
sessed the secret. With their rude hatchets
of flint a gash was hacked in the side of
the tree and the sap from the wound
trickled down an inclined piece of wood
into artistically constructed vessels of birch
bark.

Tradition, which says but little on the
subject anyhow, is silent about the quality
of the product, but it is safe to say that a
polariscope test would not show over 90-132
of pure saccharine.

Soon after the white man made his ap-
pearance on the continent the Indians dis-
posed of their clay creeks and substituted
for them iron or brass kettles, which they
either purchased in exchange for furs or
stole when they sacked a settlement.

The early settlers in Vermont borrowed
their ideas of sugar making from the
Indians, but, as in every case where the
Canadian has acquired his methods from
the aborigine, he made improvements from
the very beginning. The birch-bark recep-
tacles were not to his fancy. They were
fragile. Accordingly he had recourse to
another Indian idea, the dugout.

Along into the woods in the late winter
went an axe he would fell a basswood tree,
cut the trunk into three-foot lengths, split
the sections, and from the halves hollow
out rude, shallow troughs. These he would
carry to the nearest maple, and stand them
on end, leaning against and inside toward
the tree. Basswood was selected for this
purpose because it could be easily worked.
The more particular sugar makers today use
the same timber for the boxes in which to
pack their cake sugar, for they know it will
impart no flavor to the contents.

by the public means an outlay of at least
\$500.

The big kettle was suspended from a pole,
supported on two crooked sticks, and a
roasting fire of hardwood was kept burning
around and under the kettle. The evapora-
tion was slow. Clinders and pieces of char-
coal, of course, found their way into the
boiling sap, and the product certainly
showed evidence of its primitive methods of
manufacture.

The lot of the man who attended the fire
was not to be envied by any means. The
larger portion of the heat developed was, of
course, lost. He was obliged to stick closely
to business in order to keep the contents of
the kettle at boiling point. Gathering the
sap, too, was also anything but play. With
a neck yoke and two pails the gatherer
went from tree to tree, emptying the
troughs until his pails were full, when he
would return to the kettle. In seasons
of deep snow he was obliged to travel on
snowshoes, not the light, strapping shoe
of Indian manufacture, but heavy, clumsy
home-made affairs, showing in their con-
struction only one idea—that of utility.

The sap was first gathered from the trees
nearest the kettle, but as the day's work
progressed the gatherer's trips necessarily
became longer. Oftentimes, after a journey
to the most distant trees, and when almost
at the kettle, the tails of the snowshoes
would cross, and gatherer, neck yoke, pails
and sap would plash headlong into the
snow. The product was not marketed, each
farmer making only enough for the use of
his own household.

As the population of the country increased
and the big centre began to take shape,
there was a demand for the product, but it
has been and always will continue to be a
luxury.

The first improvement in the manufacture
of maple sugar was the jump from wooden
troughs to wooden buckets. These buckets
were constructed of cedar or pine, and at
first were crudely made. In form they
resembled an ordinary wooden stove pail,
minus ball, but instead of flaring toward
the top the circumference decreased. They
were hooped with split ash, and were a
great improvement over the troughs, which
could be used only a few years. The
buckets were of course hand made, the
product of the jackknife. When the young
Vermont farmer of those early days called
on his best girl in the evening he carried a
bundle of rough staves, which he whittled
into shape while he made love to his future
partner of joys and sorrows.

Instead of resting upon the ground the
buckets were attached to the trees with
rude hooks, called sap nails, wrought at the
village blacksmith's shop, and which were
driven into the tree under the spot. The
rived shingle disappeared with the wooden
trough, and the trees were then tapped
with a sharp-pointed semi-circular chisel
called a gouge. The gouge was driven into
the tree and turned around, and in the in-
cision thus made were driven wooden spiles.
These spiles were often made from little
saplings of sweet elder or young ash, from

AGRICULTURAL.

Grass Culture.

In your valued journal I recently saw under the heading of "reseeded a run-down sod," some sentiments good and some bad. The writer says in all cases when sod of any kind is plowed, the first crop to be put in should be one which requires cultivation during the summer so as to fit the land for grain and grass seeding. The cultivating is good so far as it goes, but it does not go far enough for grass culture to get best results. Nothing short of intense cultivation will bring best results in grass culture. Some instrument must be used several times a week for several weeks before sowing the grass seed, that will stir the earth six to eight inches deep and thoroughly tear to pieces and mix the sod and all vegetation with the soil and make it into plant food. During this cultivating process, the surface of the soil must be made true so that no water will stand thereon.

Grass should be sown Sept. 1 or as near to it as possible. No grain should ever be sown with any kind of grass. Why? First you cannot grow two crops of any kind upon the same piece of land at one time. Certainly not if one of them is grass. You cannot sow any kind of grain or other seed with grass without injuring the stand of grass. When sown Sept. 1 the first crop may be cut in the following July and if properly cared for should cut at least four tons of well-dried hay at that time and a ton of rowan in September. Five tons per annum with correct cultivation and fertilizers are easy. I have one field of seven-eighths of an acre that has yielded over 80 tons of well-dried hay in the last 10 years.

Your writer says the trouble is that the effect of plowing the sod is to turn it on edge with an air space below. When he uses the Scotch drag plow in form he may do that, but when he uses the broad American drag plow, that turns a furrow 16 to 24 inches wide by five to seven inches deep, as many do, and turns the furrow over flat with all vegetation, coarse manure, etc., at the bottom, he will find the trouble which he speaks of in the dry season of 1899 and of most every season when a little drought occurs. Those pastures thus plowed will lose their seeding or be a failure every time.

Why lose their seeding? Simply because the work is improperly performed. Improper cultivation, no matter how carefully you spread your seed, will be a failure. When you simply turn the sod over and play the ten-tooth system of cultivation on the surface or top of the sod, which is held up above the subsoil half an inch or more by the old turf and grass, so that no connection is made with the subsoil water. When this class of cultivation is resorted to he will find, as he found in 1899, great loss in seeding. He will also find with spring grass seeding with oats or barley or other grain, when he strips the grain from the field in mid-summer sun he will soon find all the grass dead.

The same will be true in many cases with all grass sown with grain any time in the year, especially if sown as intimately upon the upturned, partially cultivated sod. My worthy friend is right in his talk of spring seeding. It is worse than folly to attempt it. It will most certainly be a failure. His suggestions about millet are very good, for the reason that it tends to a greater cultivation. But his theory of sowing grass with grain is all wrong. I absolutely know whereof I speak.

I followed the advice of the fathers in grass culture for 30 years and then turned to other methods, some of which have proved a success. Among them were intense cultivation, that was a success. I also found that grass seed should be sown by itself on a true field Sept. 1, and further I found that all yard or coarse manures must be used before seeding and thoroughly mixed with soil, and I found it was better to have those coarse manures quite thoroughly decayed before seeding I use nothing but commercial fertilizers after the grass seed is sown. I used them just at the starting of every crop thereafter, and used them in proportion to the strength of the land.

I have found to turn an old sod over and give it a most thorough surface cultivation, and immediately seed it to grass, whether with grain or otherwise, in the spring or any other time, was a total failure. In every case where I have tried this process the original grass has come up through from the sod below, and taken possession of the field, and run all of the new grass out.

In seeding all stone or rubble of every kind should be removed before sowing the grass seed. All the seed should be sown on he and finished the same day. All grass seed should be sown evenly between lines; because of the different weight of grass seed each kind should be sown by itself, and harrowed in several directions with a fine tooth harrow one inch deep, then rolled.

The story of 15 years of experiments in the grass field is too long to tell here. I may give you more hereafter.

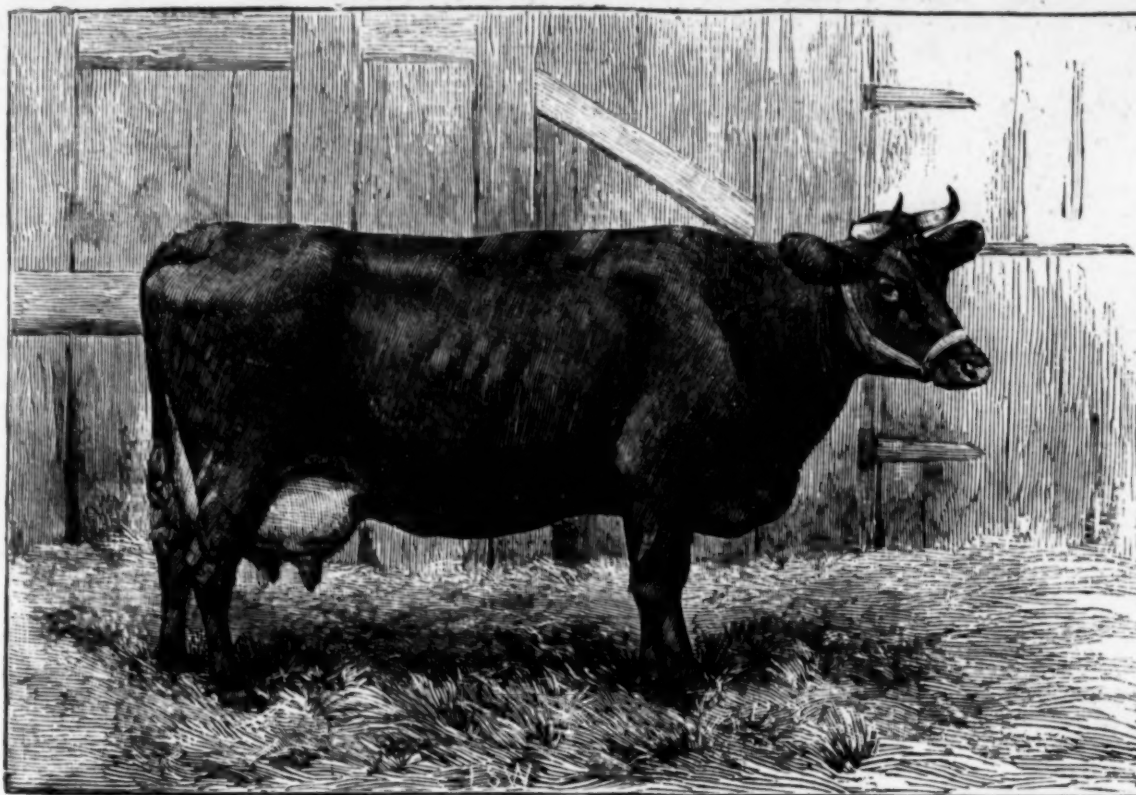
Higginson, Ct.

GEORGE M. CLARK.

Successful Creamery Practice.

Success in creamery butter making depends upon the business methods observed both in the manufacture of the product and of disposing of it when made, and upon the quality of the herds which supply the milk and cream. To make fine creamery butter today all of the conditions and qualities above must be had and used intelligently. The farmers who will not co-operate with the creamery managers by supplying good cream and milk can't kill the business in a short time. Many a creamery has simply been crowded out of localities by the action of the farmers who promised to supply a certain grade of milk and cream, but who failed to live up to their agreements. It is not a small matter to invest capital in a large creamery and then find that it is impossible to secure the right quality of raw material. So obtuse do we find some dairymen in this respect that they kill their own interests when they have money invested in the creamery in co-operation with others. They refuse to raise the standard of their herd, but trust all along that the others will supply fine cream while they continue to send the indifferent material that they have always raised. Creameries operated by farmers in many instances produce only a third-rate quality of butter simply on this account, and others through the lack of the right sort of a manager.

Strict methods must be adopted in the creamery and lived up to until the end. Lack of this has caused losses amounting to thousands of dollars to farmers. The best cows will return their highest profits when their cream and milk is taken to a high-class creamery. Let the standard of raw material be maintained, and let new blood if necessary be introduced into the herd without exception. Milk and cream tests are as essential as anything.



ENGLISH SHORTHORN DAIRY COW, CAPTIVE.

Some farmers will maintain that their herd is as fine as anybody's, and that their milk and cream are just as rich as that obtained from blooded stock. There is only one infallible way to prove his argument wrong. Let all the milk and cream be tested by the well-known methods. That will show up his fallacy and ignorance, and there is no getting around these scientific tests. They are as accurate as it is possible to make anything, and they should be accepted at the outset as the last court of appeal. Finally if a good manager is obtained one that you stand him and not desert him at the first opportunity, or when some professional promoter comes along and promises things that can never be fulfilled. WILLIAM CORWAT, Indiana.

Maine Farm Notes.

I was quite interested in reading J. J. H. Gregory's article on finding water by hazel twigs. I am not a philosopher and cannot talk learnedly of cause and effect, nor can I lay down any indisputable laws in attraction, gravitation, neomancy or witchcraft. I only want to say that people will continue to find water just the same, notwithstanding the deductions of Mr. Gregory and others. I have got a well to dig next summer and I shall get a "water-witch" to locate it and shall not be disappointed in its location.

March 23 was the first real spring day we have had thus far this season, and notwithstanding we have had good sleighing right along, yet it is thawing fast and a few warm days will carry off the snow and the travel will be on wheels again.

Hay holds out nicely, though some are hauling hay past my place. There is but little maple sapling as yet, but we hope for a good run before the snow is gone. A man must have a good bath and be well fitted out to make it pay to make sugar for sale. When I was a boy we used to tap 75 to 100 trees, and take it to the house by hauling cord wood on a hand sled, and I used to think we could get sugar faster by hauling out wood on a hand sled, and it kept us out of mischief and we usually got sweet enough to last most of the year. We never heard, in those days, of such elaborate outfits as are now in use.

The Grangers, in Maine, are generally doing good work. The young people, especially in this section, are much interested in the Grange. It is a co-operative work which must tend to the advancement and development of farming industries. M. Vernon, Me. D. H. THING.

Vegetables in Boston Market.

The vegetable trade continues very steady, with a fair supply of Southern and home products, and winter vegetables going a little higher as they grow more scarce. Old beets are 40 to 50 cents a bushel. New beets, not much larger than a lady's thumb, at 75 cents a dozen bunches, and larger sizes from that up to \$2.25. Old carrots, 50 cents a box. But few new carrots have been here and they sold at about \$1.25 a bushel. Parsnips are \$1 to \$1.25 a bushel and fat turnips 35 to 40 cents. Sweet German turnips, \$1.25 a barrel and St. Andrews yellow \$1 to \$1.15. Native onions yellow go from \$1 a barrel for poor up to \$1.50 for choice, and some fancy lots being \$1.75. Havana onions \$2 a crate, and new ones in bunches 40 to 50 cents a dozen. Leak 50 cents a dozen and chives in small supply at \$1 to \$1.25 a dozen. Radishes plenty and lower at 20 to 25 cents a dozen bunches. Cucumbers in fair supply at \$2 to \$3 per hundred. Southern tomatoes \$2 to \$2.50 a carrier for prime and poor to fair at \$1 to \$1.75. Rothhouse tomatoes 35 cents a pound. Florida egg plants \$3 to \$4 a box. Celery very scarce. We heard of one lot very good that sold at \$15 a box of three dozen bunches, and ordinary to good goes at \$10 to \$12. Balfors 15 to 20 cents a dozen, artichokes \$1.25 a bushel, rhubarb \$8 a hundred pounds. South Carolina asparagus, large bunches, at \$6 to \$8 per dozen, with Western at \$5 to \$5.50.

O cabbages vary in quality from \$1.75 to \$2.50 a barrel, and some new ones are in at \$3 a crate. Sprouts are scarce at 25 cents a quart, and hot-house cauliflower are \$4 per dozen. Lettuce is lower at 60 to 87 cents a dozen, as to quality and size. Baltimore and Norfolk spinach from \$1 to \$1.50 a barrel, and kale the same; Endive \$2 to \$3 per dozen; dandelions \$1.12 to \$1.25 a bushel. Beet greens 60 to 75 cents and parsley.

Florida string beans \$4 to \$4.50 a crate for choice and \$2 to \$3 for poor to fair. Green peas are scarce, but a few California flat peas go at \$4 to \$4.50 each. Mushrooms vary from 40 cents a pound up to 55 cents for the best. Marrow squashes are scarce at \$2 a barrel, and Hubbs are \$30 to \$40 a ton, top quotation for all sound hard-shelled Western.

Riccioli of potatoes have been liberal and Aroostocks are quiet at 63 to 65 cents for Green Mountain, 58 to 60 cents for Hebron and 53 to 55 cents for Dakota Red. York State white sell slowly at 50 to 53 cents for long and 55 cents for round. Only a small demand for Jersey sweets in double head barrels at \$2.50 to \$3.

Butter Market. The receipts of butter during the past week have been larger than the demand, and prices have declined at least one cent a pound. This increase is from Northern dairy sections and includes both creamery and private dairy. The Western shipments continue light, and none of the markets excepting Chicago, where it drops a half cent. There are some receivers who ask and claim to have received 25 cents for extra northern creamery, but it must be in small lots for lots, and 25 cents is all buyers are willing to pay. Boxes and prints go at 25 to 30 cents for creamery and 25 cents for extra dairy, with common to good at 20 to 22 cents. Western creamery tubs are 24 cents for large tubs and 25 for assorted springs. Extra dairy tubs 23 cents for Vermont and 22 cents for New York, with firsts at 21 cents, seconds at 19 to 20 cents, and low grade dairy at 16 to 18 cents. Imitation creamery in small demand at 20 to 24 cents for small tubs extra, large tubs at 20 cents and seconds at 19 cents. Refined butter seems to sell better than imitation or ladies at 30 to 32 cents, or even than low grade dairy. Cold-storage butter nearly all gone. Livestock from 16 to 17 cents for seconds up to 18 and 19 cents for first and extra.

The receipts of butter for the week were 14,482 tubs and 36,108 boxes, a total weight of 746,885 pounds, against 809,358 pounds the previous week and 686,814 pounds the corresponding week last year. This shows that there is a falling off from the previous week, but an increase as compared with last year. Receipts for Monday and Tuesday of this week are not quite as large as last week, but dealers are looking for a further increase from northern sources.

The exports of butter from Boston for the week were 1707 pounds to Provincial ports, against 48,690 pounds same time last year. New York exported 596 packages from a lot recently returned from England, then shipped in bag and forth twice. No exports from Montreal.

The statement of the Quincy Market Cold Storage Company for the week is as follows: Potatoes, 48 tubs; taken out, 1388 tubs; stock, 3220 tubs, against 3525 tubs same time last year. The Eastern Company reports a stock of 524 tubs, against 79 tubs a year ago, and reminded him that the Indians call them liars when they do not keep their word, when a quick inspection of myself, looked at my horse, and said: "Bishop, with that buckskin suit and far coat you'll go through all right, only I'll give you three pairs of moccasins to put on in place of your boots. One never knows what sort of storms will come up on the prairie. The first seven miles if your journey you will find three houses, but none after that for 23 miles. Let your horse out at their best speed upon the prairie; you can easily follow the road, as the grass will be high on either side." Without a moment's delay I pulled on my moccasins and started, driving at a rapid speed until well out in the prairie, but suddenly I discovered that the grass had been burned before the snowfall, and there was nothing to define the road. I found by the hard stubble, which showed itself where the snow had been driven off by the wind, that I was hopelessly out of the track. The wind-

storm, which had already set in, had obliterated the road over which I had come as completely as it had the stretch before me. In passing through several of the coulees with which the prairie abounds my horse was breast deep in the snow.

"A starless night came on and with the howling wind sweeping the snow first into almost impassable drifts and then leveling them to the bare ground, I had to confess myself lost."

"Until one has encountered a Western blizzard the word has little meaning. The Indians have always paid me the highest compliment when they have said that I could follow a trail and find the points of the compass as well as any Indian."

"I now kept my horse headed in the direction which I thought to be that of the agency. I said my prayers, threw the reins over the dashboard, let the horse walk as he would, and, curling myself up under the buffalo, hoped that I might weather the night."

"Suddenly Bishop stopped. I was struck that the wise fellow had struck a landmark, for he knew as well as I did that we were lost. I jumped from the sleigh and could distinguish in the darkness something under the snow that looked like a huge snake. It proved to be an Indian trail. The Indians always walk single file to avoid an ambush, and in the loam of a prairie these trails are several inches deep. Bishop followed it, and when his mate was inclined to turn out he put his teeth into his neck and forced him into the trail."

"Mr. Hinman was so sure that I had stated that he had kept a light to the window of the agency, and when Bishop saw it he leaped like a bound from his kennel. When we reached the mission, and Bishop, comfortably stabled, turned his great eyes upon me, his whinny said as plainly as words, 'We are all right now, master.'"

"Bishop was down beside the celebrated Patchen [Mambrino Patchen?]. He was a kindly fellow and had every sign of noble birth—a slim, delicate head, prominent eyes, small, active ears, large nostrils, full chest, thin gambrel, heavy cords, neat fetlocks, and was black as a coal. He was my friend and companion for over 50,000 miles, always full of spirit and gentleness as a girl. The only time I ever touched him with a whip was on the brink of a precipice where the path was a sheet of glare ice, and as the wagon began to slide I saved us both by a lash, but the blow hurt me more than it did Bishop. He saved my life when lost on the prairies many times. In summer heat and winter storm he kept every appointment, often with hero effort. Patient, hopeful, cheerful, he was a favorite of all the stage drivers, and upon coming to an inn, cold and wet, I was always sure to hear a kind-hearted voice cry, 'Bishop, go into the inn; I know just what the old fellow needs.'"

"A few months before he died, at 30 years of age, I sent him to a friend in the country to be put to rest. One day some coils in the same mine were racing, and Bishop, who had been noted for his speed, with all his old fire joined in the race, beat the coils, and dropped dead. I wept when the news came to me."—Extract from the Reminiscences of Bishop Whipple, Bishop of Minnesota.

New York Markets. Potatoes in liberal supply, and but a small part bring top quotations. Maine sell at \$1.75 to \$2 for Hebron and \$2.25 to \$2.50 for the best. Long Island barrels at \$1.50 to \$1.75 and Jersey at \$1.25 to \$1.50. State and Western, 180 pounds, \$1.50 to \$1.75. New potatoes from Florida \$2.50 to \$3.50, Havana \$3 to \$4 and Bermuda \$5 to \$6 for choice to fancy and \$3 to \$4 for No. 2. Jersey sweets \$2.25 to \$2.75 in double-head barrels and \$2.50 to \$3.50 for cloth heads. Apples in fair supply, but sell slowly at \$6 to \$10 a dozen bunches for prime Charleston and \$3 to \$5 for seconds. California is \$4 to \$6 a dozen for large and \$1.50 to \$2 for small. Brussels sprouts scarce and firm at 10 to 20 cents a quart. New beets firm at \$1 to \$1.25 a crate for Florida and \$1 to \$1.50 for Bermuda. Bunches from Charleston at \$1 to \$3.50, and from New Orleans at \$3 to \$4.50 per hundred. Old carrots, washed \$1.50 to \$1.75 a barrel, and new from B-rands \$1.25 to \$1.50 a crate. California cauliflower \$3 to \$4 a crate. Old cabbages \$4 to \$6 per hundred and new from Florida or Charleston \$2.50 to \$3.50 a crate. State celery 25 cents to \$1 a dozen rods and California at 50 cents to \$1.25. Florida

egg plants \$3 to \$7 a half-barrel basket, and lettuce in same baskets \$2 to \$5.50, scarce and firm. Norfolk kale \$1.25 to \$1.75 a barrel, and spinach 75 cents to \$1.50. New Orleans good demand and firmer. State and Western per barrel \$1.50 to \$1.75 for red and \$1.50 to \$2 for yellow. Eastern red \$1.50 to \$1.75, yellow at \$2 to \$3, and white the same. Havana \$1.75 to \$1.85 a crate and Bermuda \$1.90 to \$2.

Florida peas scarce at \$2 to \$3 per crate, and string beans more plenty, best at \$4 to \$5 a crate, but more from \$1.50 to \$1.75 than above \$4. Florida peppers are \$2 to \$3.50 a carrier and Havana \$2.50 to \$3. Bermuda parsley \$2 to \$2.50 a crate; N. York radishes 50 cents to \$1.50 a barrel. Rhubarb \$3 to \$6 a hundred bunches. Squashes at \$1.75 to \$2.25 a barrel for marrow and \$2 to \$2.50 for Hubbard. Florida tomatoes in large supply and sell slowly, prime at \$1.75 to \$2.25 a carrier, and poor to good at 75 cents to \$1.50.

Apples in moderate supply and prices remain about steady, though it takes a fancy article to bring highest quotations. Splitz at \$4 to \$5 a barrel. Soy \$4 to \$4.50 for fancy and \$2.50 to \$3.50 for fair to prime. Bin Davis, good to fancy, \$3 to \$4.50, and fair to good \$2.50 to \$3.50, choice to fancy Baldwin \$3.50 to \$4, and fair to good \$2.50 to \$3.50. Greenings from Louisiana \$3 to \$4.50, and Russia \$2.50 to \$3.50. Cape Cod cranberries move slowly at \$10 to \$12 a barrel, and Jersey are \$2.50 to \$3 a crate. Florida strawberries plenty at 40 to 45 cents a quart for choice to fancy and 30 to 35 cents for common to fair.

The poultry market is dull, but there is not as much stock coming now and prices are firm. Live chickens or fowl 10 to 11 cents a pound, turkeys the same, old roosters 6 to 7 cents. Ducks 40 to 50 cents a pair, geese \$1 to \$1.50 and pigeons 25 to 35 cents. Dressed poultry steady at last week's prices, but fresh killed is a little scarce. Supplies largely frozen stock. Fancy turkeys in demand at 10 to 12 cents.

Shall Worm-Eaten Maples be Tapped this Spring. This question is being asked so frequently and so earnestly that the following opinion is given in reply by the Vermont experiment station:

Whether or not to tap will depend upon circumstances of which the sugar maker is the best judge. His decision should be influenced by the following considerations: The sugar is the reserve food of the tree stored last season to feed the buds this coming spring. The amount of sugar taken from an ordinary maple tree by tapping is from two to four per cent. of its total sugar content. This is so small a fraction as usually to cause no appreciable loss to the tree. But if the tree has been so badly eaten by worms during the past season as to have its life endangered, it might be undesirable to make even this small drain, which would somewhat decrease the chances of life for the tree.

It is to be remembered, however, in this connection that all of the stored sugar was manufactured in the green leaves last season.

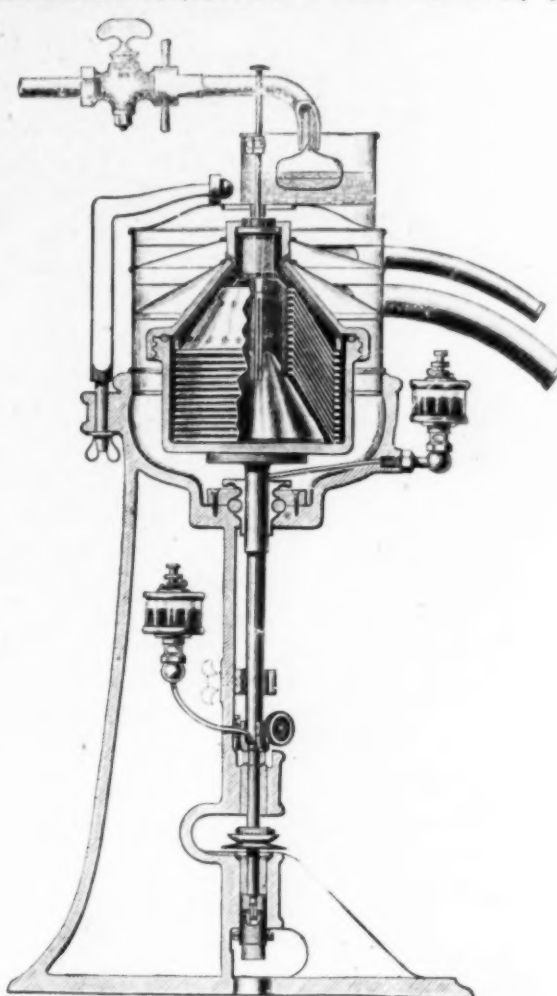
The De Laval Cream Separator.

The purpose of the Cream Separator is the quick and complete separation of cream from milk in the most practical, profitable and economical manner possible. Centrifugal separation is the application of mechanical science to the natural laws governing the creaming of milk. Centrifugal force is the only force which is generated by high velocity, or, in other words, rapid revolution.

The separator consists of a small, cylindrical, steel bowl or vessel, which is enclosed within and mounted upon a frame provided with the mechanical equipment essential to acquiring a high,

17. Have stirring and handling of ice.
18. Have milk and icehouse.
19. Have multitude of utensils.
20. Have washing and care of utensils.

Mr. W. A. Henry, dean and director of the University of Wisconsin Experiment Station, Madison, Wis., says: "The use of the De Laval separator is a great boon to the progressive dairy farmer, who is making the most out of his milk by manufacturing it at home. The amount of fat which many dairymen lose in the skimming is surprisingly large, and only because they do not know that such is the case do these dairymen daily suffer this loss."



revolving speed, with a minimum expenditure of operating power. The whole milk is contained in this rapidly revolving steel bowl, the separation almost instantly effected within it, and the cream and skim milk continuously and separately discharged from it, while the machine may be used for a few minutes, or as many hours at a time as may be necessary according to the amount of work to be done.

The improved "Alpha" Separator places in the separating bowl a system of round and sloping steel discs, or plates, one above the other, which form a series of sections or compartments, by means of which the milk is divided into thin layers or strata, and is thus subjected to the centrifugal force developed by the revolving speed of the bowl. In this sheet instead of practically solid bulk.

Some of the benefits the De Laval Cream Separator would confer upon you would be:

1. Save 10 per cent. to 60 per cent. in skimming.
2. Save five per cent. to 10 per cent. in churning.
3. Increase butter value five per cent. to 50 per cent.
4. Save time and labor.
5. Save ice and water.
6. Insure purity of product.
7. Remove tuberculosis and disease germs.
8. Give a much superior cream.
9. Give cream of your desired density.
10. Give warm, fresh, sweet skim milk.
11. Obviate scours in calves.
12. Give the best separation.
13. Do away with taints and odors.
14. Enhance keeping qualities.
15. Save woman's and house work.
16. Save one-half time in churning.

We have tested skimmilk for men who thought they were pretty good dairymen where there was as much as one per cent. of fat remaining in the skimmilk, though generally the loss is about one-half that, as shown by our tests. Now think of it for a moment: If the full milk contains four per cent. of fat, and the dairymen loses one-half of one per cent. of this fat by imperfect skimming, there is a loss of 12 1/2 per cent. by the old method, about all of which is saved without difficulty through using a good Hand Separator. To care for the cows, milk them and handle the milk, and then each day lose 12 1/2 per cent. of the fat produced, is permitting a continual loss which no thoughtful dairymen will long stand when he comprehends the situation. By the use of the 'Baby' Hand Separator the milk can be at once almost completely rid of the fat, leaving the warm skimmilk fresh for the calves and pigs while the cream only need receive further careful attention. With the Hand Separator and the milk test the progressive dairymen's cow master of the situation.

"Continued experience in our creamery, which we operate in a practical way as well as for experimentation and instruction, has given us still higher appreciation of the 'Alpha' De Laval Separator. The exhaustiveness of their skimming under the varying conditions of milk flow and temperature continues highly satisfactory, and the machines give full evidence of lasting qualities under daily use."

The De Laval Separator Company of 74 Central street, New York City, has issued a pamphlet on the Baby Cream Separator, or Up-to-Date Dairyming, which they would be pleased to send to intending purchasers, complimentary, on receipt of their address.

Quincy Mutual Fire Insurance Co.

INCORPORATED IN 1854. COMMERCIAL BUSINESS IN 1861
CHAR. A. HOBBS, President. WILLIAM B. FAY, Secretary.

CASH FUND JANUARY 1, 1900, \$645,559.53
AMOUNT AT RISK, \$3,912,684.06

Losses paid during past year \$60,087.95
Dividends paid during past year \$65,563.99

GAIN IN SURPLUS DURING PAST YEAR, 6160.17
SURPLUS OVER REINSURANCE, \$380,197.75

A lady writes: "Muscular women as doctors of whom, as we read and plant, have been told, have been told, in which we find the giving of milk, that the milk is both cheap and good, and the supply of milk is not as plentiful as it used to be, and as time is passing, the milk is becoming more and more scarce."

But we desire to find in which we find the giving of milk, that the milk is both cheap and good, and the supply of milk is not as plentiful as it used to be, and as time is passing, the milk is becoming more and more scarce."

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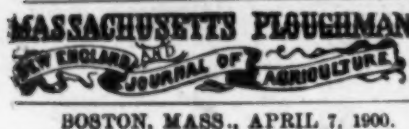
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But we desire to find in which we find the giving of milk, that the milk is both cheap and good, and the supply of milk is not as plentiful as it used to be, and as time is passing, the milk is becoming more and more scarce."

Hood's Sarsaparilla

Cures those eruptions, boils and pimples which are so likely to appear in the Spring; cures scrofulous diseases in their most tenacious forms; cures salt rheum or eczema with its dreadful itching and burning; cures all stomach troubles due to generally weak condition and impure blood; cures debility, sick headache and "that tired feeling," which just as surely indicate that the blood is lacking in vitality and the elements of health. Hood's Sarsaparilla

Never Disappoints.



BOSTON, MASS., APRIL 7, 1900.

Now that cigarette smoking is prohibited at the weather bureau we shall probably have fewer "cloudy" forecasts.

The minister who in commenting on the Sheldon fiasco declares his belief that "if Jesus had entered upon the experiment he would not have made such a pronounced failure of it," shows a faith in his Lord which, though microscopic, is commendable.

Mrs. K. del this sums up the qualifications for an actress: "You must be a marvel of patience, have the figure of a Greek statue, the temper of an angel (that is very necessary), the face of a god and the skin of a rhinoceros." Presumably Madge herself possesses all these things.

New York has decreed that only such statues as possess intrinsic artistic beauty shall be permitted a place in the city parks. It wouldn't be a bad idea for Boston to follow suit here. We have some awful to king statues on Commonwealth Avenue, the dancing Lief Erlsson being not the least ugly of them all.

Librarian Whitney aimed a neat shaft at Boston faddism when he remarked in his lecture on the library's history that the first book taken out in 1838 touched solid ground and was Soutby's "Common Place Book." If the library were to be first opened nowadays, we know full well, he comments, what would be the book first asked for—some book on genealogy, which should make one a descendant of Revolutionary heroes, or on heraldry, or astrology, or palmistry, or mental healing, or some other dreamy or occult thing. But in those days people's feet were not winged.

Baltimore is now to have a Christian paper, that is, a paper which will call itself Christian. The claim to the title rests up to date on the journal's decision to exclude from its columns "all advertisements of the liquor business, prize fights, Sabbath desecration, court investigation of the military, and everything which is corrupting to public morals." We recommend to the attention of the projectors the Independent's recent "Plea for the Yellows." We don't endorse the plea in *extenso*, but we believe that even the yellows are preferable to journalistic bigotry.

This "plain merchant's" tribute to Wendell Phillips does honor to Mr. A. Shuman no less than to its subject: "He honored mankind wherever he found it, he had no word to say in favor of race pride or of race prejudices, but everywhere evinced his high respect for a common mankind, and in his paper he set an example for men of every shade and color. As the throng from day to day gazed upon his features cast in impressive bronze, well may they remember what the lamented poet John Boyle O'Reilly said of him:

"A sower of infinite seed was he,
A woodman that bowed to the light."

The great obstacle to the improvement of farm stock is the cost of thoroughbred stock of the best breeds, which are needed to grade up the stock they now have. Why cannot such farmers who live near together unite in purchasing a superior animal that will serve all in the vicinity. Those who help pay for the male will secure his services free, while others can get the same service on payment of a fee that will in most cases more than pay the cost of the purchase in a few years. We note in a Western paper that some farmers have been benefited by the purchase of a horse because it was a fine looking animal, but which proved worthless as a stock getter because he was of no particular breed. Only thoroughbreds can be depended on as breeders. Whoever buys should be a good judge of stock, for the thoroughbred may have characteristics that will detract from his value for breeding.

While the committee on investigating the gray moth commission were preparing to make their report unfavorable to the commission and against an appropriation to be expended by experts, but placing the work in the hands of city and town officials, the Massachusetts Fruit Growers Association met at Worcester and passed the following resolutions unanimously. As fruit growers they may be supposed to have some interest in the extermination of this destructive foe of our orchards:

Resolved, That the Massachusetts Fruit Growers Association, in annual session assembled, approves the methods adopted by the gray moth committee of the State Board of Agriculture in their efforts to exterminate the insect pest known as the gray moth.

Resolved, That we earnestly ask the Massachusetts Legislature to grant the appropriation asked by the State board of agriculture for the suppression and extermination of this noxious insect pest.

The business of providing for summer boarders is in many of the New England States one of the best means of making farming pay. The summer boarder comes northward usually for the purpose of recreation, and is quite willing to freely spend his money if he can find nearby fishing waters where he can get not merely recreation, but something tangible for the money he has expended. In proportion as the advantages are made greater, a wealthier class of summer visitors will be attracted and more money will be made. The State of New Hampshire reports last year nearly 175,000 visitors from other States who came north to enjoy its climate and scenery. The money they paid for board amounted to nearly \$3,000,000, besides the large sums which most or all of these expended outside, all of which made money more plentiful in the State. What is needed is the purchase of small holdings of land by wealthy city people, who shall use these as summer homes. This is done extensively in Europe, where the winter home in the city and the summer home amid rural scenery has become the established order of things in places where the products of the soil are not large enough to maintain families in comfort throughout the entire year.

Our esteemed correspondent, George M. Clark of Hingham, Me., who writes upon grass culture in this column, is known as one of the most successful growers of grass in New England, and he has achieved an almost national reputation because of the enormous crops of grass he has grown by his methods. The editors of this paper fully agree with all his recommendations, excepting on two points, which we think

are due to the fact that our experience has been in a different climate and upon different soil. In the vicinity of Boston we would prefer to sow grass seed without grain between Aug. 15 and Aug. 30 than to wait until Sept. 1, and if we were farther North, we would do it earlier, if we had thought we should soon have propitious weather for the germination of the seed. But we have seen both August and September so dry that we thought it would be only a waste of seed to put it into the ground, no matter how carefully it was prepared and fertilized. In such a case, and other cases where we did not want to have land lie fallow until August, we have obtained a good catch and a good crop of grass by sowing the seed with oats early, very early in the spring, seeding the oats thin, and cutting them off by hand before the seed was ripe. Yet we like fall seeding without grain better when we can secure it.

At this season of the year, whoever has plants of horse radish growing on the place feels moved to dig some for home use. If the plants have been neglected or were planted shallow the previous year, there will only be sprouting roots, most of them tough and hard, showing that they are more than a year old. These roots are of little value, and it is an interminable and eye-deceiving job to grate them. The gardener grows a horse radish that has a thick root with comparatively few sprouting roots at the lower end. He plants in rich soil a small root, often making a hole with a crowbar where the soil has been made mellow, and drops the smallest piece of root to the depth of a foot below the surface. This root sends up a shoot which becomes the main root and thickens as the leaves grow above it. As the horse radish is often grown among early peas or beans, this top is cut down frequently early in the season, but without hindering and probably rather helping the growth of the crown root, as the shoot upward to the surface is called. In digging in the fall all the sprouting roots at the bottom of the crown are saved so far as possible. Some always escape, and these are watched and cut down next year, so that the patch does not perpetuate itself. If no other way can be found, the plant is cut several inches below the surface and the hole filled up with salt, which puts a veto on its further growth.

Russia has mobilized an army of 250,000 men on the Black Sea. This fact can have but one meaning. This great power has long been restless under the restrictions which European nations under the lead of Great Britain have sought to hem it in. England is fearful that her supremacy in India, that has been held more than a century, will be disturbed. But it is doubtful whether Russia now cares much for India. Once it was the source of great wealth to all the nations that secured its trade. Lately it has become a burden and expense, as its frequent famines show. Great Britain is now spending more than \$4,000,000 per month in giving employment to native Indians on canals and reservoirs that are gradually freeing India from the dangers of future famines. Russia has work enough of this kind at home. If it wanted more room for work it can find it close by its own territory of Siberia, in Corea and northern China. The great ambition of Russia has always been to secure an outlet to the sea. With the great navy which Britain controls, England ought not to object to this. Yet if Russia secures railroad concessions from Persia that will give it an outlet in the Persian gulf, there is sure to be a sharp protest from Great Britain for breaking out of the limits that the other European powers have set for her. It may be that the Eastern war that has so long been looked for by European statesmen will grow out of this Russian expansion.

The Chinese Empire has long been noted as the most conservative and even reactionary of nations. But of late years it is showing signs of unrest that may and probably do mean that it is beginning to awaken from the long sleep it has taken. Little as the missionaries appear to have accomplished among its people, they have at least taught them that there is a civilization which differs from their own and have thereby modified to some extent the self-conceit which a century ago led the Chinese to believe only themselves civilized, while all surrounding nations were contemptuously regarded as "barbarians." Contacts with other nations, and especially the war with Japan a few years ago, have still further modified this notion of Chinese superiority. Fifty years ago Japan was seemingly as unprogressive as China. But the improved navy so quickly destroyed the old ships which the Chinese relied upon that the great empire was at the mercy of a country that possessed not a tenth of its population and wealth. It is true that in the far

interior of China the old ideas that all foreigners are inferior still prevail. Some of our missionaries have penetrated to these far-off regions, and have in some cases been killed. This is enough evidence that these missionaries who are still in that territory should get out quickly as possible. But the governments whose citizens have been thus abused should and will hold the Chinese authorities responsible, and compel them to pay compensation for the lives that have been lost, so far as that is possible.

Our New Possessions.

The people who are clamoring so loudly for the establishment of an independent government in our newly acquired territories in Cuba, Porto Rico and the Philippine Islands, and for the withdrawal of the United States civil officers and troops from those islands, can scarcely have studied the history of the United States closely, or given much thought to the conditions which fit a people for local or national self government.

Perhaps the best and earliest instance here of such self government is to be found in the articles of agreement signed by the Pilgrim Fathers on board the Mayflower. They established a government in which each freeman should have a voice, and in which, after an expression of opinion, the majority should rule. All were men who were thinkers of deep convictions and most of them were men of good education for the times. All were actuated by a principle of the most noble and the greatest good for the community more than by any selfish desire of honors or power.

From that beginning, and from the later settlements at Shawmut and other points in Massachusetts Bay, arose the foundation of the town meeting to govern townships, the union of townships into provinces, and the union of the provinces into a Federal Union, which perpetuated the principles of the Pilgrims upon a larger scale, throughout the United States.

In the earlier settlement of New York by the Dutch there was more of the military power, which, if not calculated to allow a free expression of personal opinions, was certainly with such a phlegmatic people conducive to the preservation of good order and discipline, with submission to recognized authorities.

Farther south the early settlements were under the patronage and control of men of wealth, education and influence, who shaped legislation almost as they pleased, and almost invariably in favor of equal rights to nearly all the settlers, or, we might say, to all who had been proven worthy of it. William Penn in Pennsylvania and Lord Baltimore in Maryland are noteworthy examples of such leaders, but there were also leaders in Virginia, the Carolinas and Georgia, who, if less well known in history, were not less influential in the settlements there, and if the character of the settlers and the conditions which surrounded them led to some limitations of the regulations adopted by the Patrons who settled New England, the idea of "a government of the people, by the people and for the people" was a leading principle with them. In the Southern States, developed by their war with Spain, but unfortunately many of them were killed or died before the United States took control. We do not know that Porto Rico has any such or any men with ambition to rule, or any well-defined plans for the improvement of the people or development of the resources of their island. In the Philippine Islands Aguinaldo might have proved himself such a leader of his people if he had not shown himself unworthy of such a trust by his treachery and avarice, his brutality as made evident by his orders for the slaughter and plunder of all white inhabitants of Manila, his massacre of natives who would not follow his flag or assist him, his assassination of generals and others who ventured to dissent from his policy, and his later acts of brigandage and guerrilla warfare.

But the conditions which naturally led up to self government in the United States exist but partially in Cuba, and not at all in the other islands. They are peopled by various races and those of mixed blood. Race prejudices and class prejudices are strong, and need but little opportunity to break out into race wars. Most of them lack education, and that which education has, though it does not always create the power of sound thought and planning wisely, not for one's self alone, but for a people and a nation. Suffering for more than four centuries under the tyrannical rule of Spain, their ideas of liberty are but

the of freedom from all restraint is a self government means to them only the power of the stronger to subjugate the weaker party, and to rule over them as they were ruled over by Spanish officials.

In Cuba, the intelligent leaders of whom we have spoken are most anxious for annexation to the United States, as they can see that their people, like those in the other islands, need years of education before they can be trusted to think and act wisely for themselves. The experiment which was tried at the close of the civil war in this country of giving suffrage to a class who had no experience in governing; who lacked the knowledge of how to properly use the power so granted them, and many of whom had learned to feel that their former owners, masters and all in authority over them were natural enemies, whose advice was to be rejected and counsels opposed under all conditions, was not calculated to give to them nor to the people of the United States encouragement to place full power in the hands of those who had reason to feel that they had suffered because of too much power having been exercised over them, and who would gladly embrace an opportunity to make reprisals or seek revenge.

Cuba and Porto Rico are suffering to lay, as were the Southern States in 1865, from the evil effects of a war. That which has been their chief industry, agriculture, is prostrated from a lack of the farm buildings, farm animals and farm implements destroyed during the contest. All other industries suffer because of a lack of capital but more because of a lack of confidence in one another, and in the new power which has replaced Spain as a ruler and a law-maker for them.

They may need years to regain that confidence, and to attract capital to their aid. A new generation may need to be educated to a knowledge of the benefits of the changes that have taken place, or that will take place, under the mild and beneficent rule that we hope our country will give them. It is nearly 35 years since the Southern States, conquered, crushed, humiliated, and suffering from the effects of the long war, were brought back into the Union. Today a new South has been created, wiser and brighter in prospects than the Southern States were before, and more than equal in prosperity to the dreams of the most ardent advocate of a Southern Confederacy.

We do not expect to remain on earth to see the changes another 35 years may bring about, but none who can see and see not only Cuba, but the entire West India Islands, reconquered, rejuvenated and united with our Southern States in a friendly rivalry with the States of the North—which then may be far north of our present boundary line—to see which shall best promote the interest of the whole country.

And we do not doubt that before that time our possessions in the Pacific Ocean will have prospered more than one as have the possessions along the Pacific Coast and the Rocky Mountains, which we obtained from Mexico at the close of the Mexican war, which many then prophesied would be worthless to us because of their condition, almost unsettled and unknown by white men, peopled by savage tribes always at war with one another and with the white man, and separated from the country by two almost impassable barriers, the Great American Desert or a full plain, and the ever snow-capped Rocky Mountains. This is a world of progress, and the many changes of the past half century may be followed by others equally great ere another 50 years have passed away.

Women and Life Insurance.

Until quite recently women have paid little attention to life insurance as an investment in their own lives. Long ago, to be sure, they began to encourage their husbands to be insured, for they were quick to recognize that among their neighbors Providence has often been represented by an insurance policy, but the idea of taking out insurance on their own lives has until lately seemed to them rather fantastic. There were several reasons for this, among them, insurance companies have until recently regarded women as greater risks than men, and for this reason have offered them much less attractive rates. Then there has always been and is still reluctance on an insurance company's part to insure a wife for the benefit of her husband, a reluctance, we might add, in which women have not unreasonably shared. A third explanation of the small number of women who take out insurance policies may be held to lie in the strenuous medical examination to which applicants for insurance are subjected.

The primary obstacle to life insurance for women has now been removed. Today the leading companies write policies for women at the same rates as for men, and they offer to women policy holders precisely the same privileges that their men clients enjoy. Women nowadays enter into business pursuits, conduct bills and write novels just as men do. Their need of a loan is often, therefore, quite as pressing as any man's. In the old days a woman in a temporary financial straits turned to some man for help, and not infrequently, the straits would have us believe, received money for which she was ultimately obliged to pay very dearly. The woman who holds an endorsement policy has, however, an ever available means of borrowing. To borrow on such collateral is merely a business proposition, and is as regarded by the party of the first as well as of the second part.

There is scarcely a better way for the wage-earning woman to provide for her future than by means of life insurance. A young woman of thirty, let us say, who earns a little more than she spends, should certainly carefully consider its advantages. Her health is good, and she is averse to thinking about a future when it may not be so good and when her quickness and fertility of invention will be likewise somewhat impaired. The chance, therefore, are altogether against the probability that she will save any money. Only some kind of compulsory insurance will fit her needs. Moreover, \$50 a year in a savings bank is unimposing, even after it gets into the bank. And the chance that without compulsion it will never get in are, as we have said, tremendous.

Here, then, is the province of the insurance companies. For her fifty dollars the woman of thirty may take out a twenty years' endorsement policy, which will mature at the very time she in all probability will most feel the comfort of the fourteen hundred dollars or so the policy will represent. Moreover, all through those years some dependent upon her may have been protected by that same thousand dollars, and a considerable amount of illness avoided because of the happy assurance that there was something upon which, should need arise, she could rely for money. Space is lacking in which to discuss another very interesting employment of life



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insurance, a mother's policy, so written as to mature in time for the education of her child. This idea systematically worked out would, however, prove undoubtedly to be one of the greatest blessings of mankind.

For the natural reluctance on the part of women to undergo the necessary medical examination, there is much to be said, and it is our belief that women in general will not insure until women physicians are employed as medical examiners. It is one thing for a woman to take her life to the sympathetic man who is her family physician, and it is quite another for her to be asked all kinds of questions in a doctor's insurance building by a man she has never before seen. Yet it is obvious that the more strenuous the examination and the more careful the examiner, the more secure is the insurance company, and the more desirable are its policies. Women should be sensible enough to recognize this, and stand by it even in the face of some slight personal discomfort.

A loud outcry is made by the merchants of Porto Rico because the tariff bill agreed to in Congress imposes 15 per cent of the Dingley tariff duties on imports from Porto Rico to this country. They clamor for absolute free trade, and their demand is echoed by many in this country who do not stop to think 15 per cent of the Dingley tariff comes a good deal nearer freedom of trade than the Porto Rico laws have ever before had. Under this light duty all their products will come to the United States, and the producers of Porto Rico will get higher prices for all they can grow or make than they have ever done. The secret of the outcry for free trade is that the merchants have bought all of last year's crop of sugar and coffee at very low prices, taking advantage of the scarcity of it in many and the necessities of the people. If they could land all this in the United States without paying a duty their profits would be enormous. They bought the sugar and coffee so cheaply that even the duty imposed will not prevent them from reaping heavy gains. The demand for absolute free trade with Porto Rico comes mainly from those who advocate this policy as best under all circumstances, and who, therefore, do not stop to consider what the present effect will be, as any true statesman should. Possibly we may have free trade with Porto Rico in the future, as we have between the States of this Union. But it requires time to prepare the people of Porto Rico for free trade, so that it may come without doing them an injustice, as it clearly would do if thrust upon them now for the benefit of the rapacious merchants who have already plundered them. The tariff law as agreed to by Congress provides that it shall cease to take effect in a little less than two years. That will give the people ample time to prepare for the change without doing an injustice to anybody. The merchants who are clamoring most loudly for free trade would not be opposed if a higher rate of duties had been agreed to by the conference committee.

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[illegible]

all and occupying land which they want for

men, and who are too far from active operations to find any market for them. We have seen the use of the old plank on some pond or swamp hole in season as deep as the creek seemed to be enough to pay for the labor, and filling full of stone wall and smaller stone, and use this with two or three feet of earth, and make a suitable drainage for water, and morasses, into a fertile and well-tilled bit of garden land. A similar process is being of wells either ten feet or deeper in places and partially filling with stone, and filling with earth, and making a good place. Such a well will drain a space of two square, and the earth taken out will fertilize the surrounding soil. Coal ashes and may be mixed with the stone to good advantage.

THE COBEN GROUP.

The United States Department of Agriculture has made an effort at the Paris Exposition to show the people of Europe realize the value of the American corn or maize as an article of food, and a party there to cook it in the same ways in which it is used in this country, and to tempt the appetite of those who have never tasted it at the table, but thought it only fit to use for fattening stock and swine. We suppose the Americans had a good success, for the Boston correspondent writes: "Thanks much, under whatever name it is known in other States, will be served and we hope they will not omit the 'Indian' pudding, which is such a favorite in New England, and which is a good work, and has not been thought it desirable to save our exports of corn for stock feeding in other countries so long as we could use it for the same purpose, and sell them at a profit. If we can get them to appreciate it as the human race, we have it in our power to be advanced to a point where they will afford to use it for stock feeding. And we think the corn crop of this country will be increased as the demand for it may increase, and as the value of the stock it becomes better known, and we are more carefully saved for fattening the corn-growing sections, the crop will be more profitable. Scientists say the corn crop is at least 10 per cent. more than it was 40 years ago. If of the feeding value of the corn crop is increased, the value of the crop will be increased, for, yet where the corn has been grown, this part of the country has often been wasted, or utilized only in a fashion that saved but a small proportion. The new uses that have been found for the corn, the stalk, and the grinding of the outer part into meal, are industries which seem to promise now to give an increased value to the

Warrester Notes.

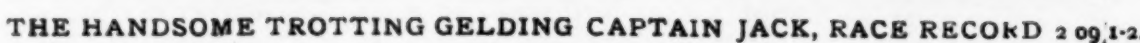
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